

## ABSTRACT

A polarization-maintaining photonic crystal fiber **10** includes six thin holes **4a** and **4b** adjacent to a core **1**. Among these holes **4a** and **4b**, a pair of holes **4b** at opposite sides of the core **1** have a diameter greater than that of the other four thin holes **4a**, and therefore, the polarization-maintaining photonic crystal fiber **10** has polarization-maintaining ability. An overclad layer **3** exists around the clad layer **2** which includes a large number of thin holes **4a** and **4b** around the core **1**. The overclad layer **3** includes a pair of marking portions **5** at opposite sides of the core **1**. The marking portions **5** are holes which can be seen at positions different from the clad layer **2** when the fiber **10** is viewed from a position right above the fiber **10** in the drawing. In this way, the direction of the polarization plane of the polarization-maintaining photonic crystal fiber **10** is identified.